CLAIMS

1. A method of separating a particle fraction from a particle stream, wherein the particles of the particle stream are separated in a fluid in a container under the influence of gravitational force based on difference in vertical velocity, wherein the fluid and the particles are moved in a substantially horizontal direction defining a relative direction of movement, and wherein at a first location a first particle fraction is collected, and at a second location somewhat removed from the first location, a second particle fraction is collected in respective collecting means, wherein means are provided for causing the fluid to move in the relative direction of movement, **characterised** in that the means are placed maximally 3, preferably maximally 2 and most preferably less than 1 x the diameter of spread of the particles that spread out the most of the particle fraction spreading out the most.

2. A method according to claim 1, **characterised** in that the particles are introduced into a vessel having a substantially circular horizontal cross section and the fluid is moved uniformly in the circumferential direction in the vessel.

3. A method according to claim 1, **characterised** in that a container is used wherein the means are formed by baffles placed in the vessel and radiating from a shaft placed vertically in the centre of the vessel, toward the circumferential wall of the vessel.

4. A method according to one of the preceding claims, **characterised** in that as fluid a liquid medium is used.

5. A method according to claim 4, **characterised** in that a liquid medium is used having a density lower than that of the particles.

6. A method according to claim 5, **characterised** in that a liquid medium is an aqueous medium.

7. A method according to one of the preceding claims, **characterised** in that the particle stream is formed by particles of a waste stream.

8. A method according to claim 7, **characterised** in that the waste stream to be separated contains metal particles.

9. A method according to claim 7, **characterised** in that the particle stream contains plastic particles.

10. A method according to one of the preceding claims, **characterised** in that prior to their introduction into the fluid, the particles are subjected to a classification treatment.

11. A method according to one of the preceding claims, **characterised** in that the introduction into the fluid occurs in a particle size-dependent manner at different locations along the relative path of movement, such that the larger particles are the closest to the collecting means.

12. A method according to one of the preceding claims, **characterised** in that at the underside of the container the first relatively heavy and the second relatively light particle fractions are discharged separately via a respective discharge opening in the container.

13. A method according to claim 12, **characterised** in that the discharge occurs by using a jet stream.

14. A method according to one of the preceding claims, **characterised** in that the fluid has a vertical velocity such that the fluid originally present at the feed level in a container having a substantially circular horizontal cross section, will during one circulation of the fluid have moved at least as far as the collecting means.

15. An apparatus for the separation of particles, which apparatus comprises a vessel provided with baffles radiating from a shaft placed concentrically in the vessel and in the direction of a circumferential wall of the vessel, and wherein the vessel at the bottom or top is provided with at least two collecting means having their own discharge means, **characterised** in that there are at least 10 baffles,

preferably at least 20 baffles and more preferably at least 30 baffles.

16. An apparatus according to claim 15, **characterised** in that the circumferential wall of the vessel, which in use is in contact with the fluid, is designed for rotating at the same rotational speed as the shaft.